Clinical Experiences and Mediational Activities in Urban Teacher Preparation: Learning and Critical Consciousness

Craig Willey
Indiana University-Purdue University Indianapolis

Paula Magee Indiana University-Purdue University Indianapolis

Abstract

In a longitudinal design experiment conducted within an urban teacher preparation program, we employed ethnographic and autoethnographic methods to investigate the following questions: 1) In what ways do clinical experiences (CEs) support prospective teachers' (PTs) development of knowledge, skills, and dispositions necessary for urban teaching? 2) How is it determined that adjustments need to be made to the design and facilitation of CEs, and what did these adjustments yield in terms of student learning outcomes? The program centers and leverages CEs in order for PTs to connect theory and practice, particularly an awareness of, and skills associated with, equitable teaching practices. In our two-year field-based program, CEs included community explorations, one-on-one and small group work with children, two student teaching practicums, and various school-community events. We describe the process undertaken to maximize the benefits yielded from CEs. After working with three cohorts of PTs for their entire professional training, we found that: 1) focusing attention on the intentional design and assessment of the mediational activities coupled with CEs leads to more nuanced understandings and enactments

of culturally relevant teaching among PTs; and 2) CEs afford PTs abundant opportunities to shape complex identities as urban teachers. Specifically, we found that clinical experiences and corresponding mediational activities support PTs' understanding of families of color, allow them to recognize and address problematic schooling practices, and strengthen PTs' otherwise fragile critical consciousness. We conclude that strategic interventions can provide clarity for PTs around what has been learned, and what is left to be developed.

Key Words

clinical experiences, urban teacher education, mediation, culturally relevant teaching

Introduction

Prospective teachers' (PTs) clinical experiences have been the focus of research and scholarly investigation for decades. Indeed, Standard 2 of the Council for the Accreditation of Educator Preparation's (CAEP) focuses squarely on

Corresponding Author:

Craig Willey, Indiana University-Purdue University Indianapolis

Email: cjwilley@iupui.edu

Clinical Partnerships and Practice, underscoring the importance and central role of clinical experiences. Yet, most of the attention around clinical practices has been on using them, to develop proficiency in pedagogical techniques. At the same time, there is an emerging body of literature around the importance of PTs' development of culturally relevant pedagogy (e.g., Ladson-Billings, 1995), awareness of oppressive White ideologies (e.g., Emdin, 2016), and productive dispositions towards children and families of color¹ (e.g., Murrell, Diez, Feiman-Nemser & Schussler, 2010). Less attention, however, has been committed to the examinations of the role of clinical experiences in mediating the sociocultural awareness and productive dispositions of PTs.

This article reports the findings of a research study designed to measure how intentionally-designed clinical experiences have supported PTs to: understand themselves as cultural beings who are situated in racialized hierarchies; understand the critical, sociocultural dimensions of urban schooling; acknowledge and adjust their perceptions of children and families of color, and take steps towards developing an equitable and academically rigorous curriculum and instruction for urban youth. Perhaps this study's most important contribution, however, is to highlight the efforts of the teacher educators to design, reflect upon, and adjust the clinical experiences within which PTs engage, and the continually-evolving mediational practices that help PTs maximize the meaning to be made of these experiences.

Prospective Teachers' Development of Culturally Relevant Pedagogy

The demographics of school-aged children has changed dramatically over the past 20 years, specifically there are more children of color –

specifically Latinas/os and children whose native language is not English – enrolled in U.S. schools (Gandara & Contreras, 2009). In fact, 2014 marked the point where the majority of student in U.S. schools were non-white, and white students made up less than 50% of the students for the first time in U.S. history (Krogstad & Fry, 2014). Demographers expect that these trends, towards an increasingly more diverse K-12 student body, will continue for the foreseeable future. At the same time, we have collectively struggled to develop a diverse teacher workforce, and, generally speaking, our largely white teacher workforce has struggled to develop an approach to designing and enacting a curriculum and pedagogy that affirms and reflects the knowledge base of, supports meaningful connections with, and sufficiently challenges, students of color, a significant factor leading to the so-called "achievement gap" (Darling-Hammond & Brandsford, 2005).

While some scholars have pointed to the fallacy of narrowly, or exclusively, using measures such as standardized tests to evaluate schools' and teachers' success with students of color (e.g., Gutierrez, 2008; Martin, 2009), we nevertheless know that, as a whole, Black and Latina/o students have not been provided the highest quality instruction relative to their white counterparts (e.g., Flores, 2007; Gandara & Contreras, 2009; Ladson-Billings, 2009). Numerous factors are identified that contribute to this reality, including persistent deficit thinking around students of color and their families/communities (Valencia, 2010), failed social policy (Gandara & Contreras, 2009), and institutional racism (Bonilla-Silva, 2013). Teachers, most of whom are white and monolingual, and naturally a part of the dominant white culture, have a limited understanding of the ways in which these ethnic/cultural differences play out in school settings (Leonardo, 2010). At the same time,

research evidence is mounting that suggests the important role of affirming language and culture in the teaching and learning process with Black and Latina/o children (e.g., Ladson-Billings, 2009; Tellez, Moschkovich, & Civil, 2011), although it does not appear to be clear what kinds of experiences, and with what forms of mediation, support teachers to leverage and honor language and culture in daily instructional activities.

We ground our teacher education program in Ladson-Billings' (1995) framework for culturally relevant pedagogy (which we also refer to as culturally relevant teaching). We intentionally and explicitly attend to all three tenets that Ladson-Billings identified in her seminal paper: academic success, cultural competence, and critical consciousness. From early clinical experiences through student teaching, we design our clinical experiences to serve as living examples of how PTs can look for ways to be "culturally relevant" in everyday teaching, not just when they are teaching lessons that look "cultural." It is our goal that PTs come to understand the missteps teachers often make when they try to "insert culture into education instead of inserting education in the culture" (p. 159). We stress how a teacher's actions, language, and instructional decisions all reveal a teacher's deep understanding, or misunderstanding, of what it means to be a culturally relevant teacher. As such, through this study we explore how PTs – again, mostly white, Christian, heterosexual, able-bodied and monolingual - come to understand teaching and learning dynamics with urban youth.

Praxis Model of Teacher Education and Mediated Activities

This project is grounded in cultural historical activity theory, where "teacher learning is necessarily distributed and examined across a minimum of two activity systems in which teacher apprentices document children's learning trajectories *in situ*, as well as their own" (Gutiérrez & Vossoughi, 2010, p. 101); that is, deep teacher learning is dependent on their ability to situate and make sense of children's thinking and action in the larger sociocultural context and, similarly, examine their [PT's] own learning and development in light of their histories, experiences, and new ways of thinking. The latter, critical reflective practice, is a key principle in transformative adult learning (Brookfield, 2000) and one that has high importance in this study.

It is useful to think about PTs' development of culturally relevant teaching practices and perspectives using the lens of activity theory, utilizing many of the constructs put forth by Vygotsky (1978), such as mediation, scaffolding, apprenticeship, and organization of learning activities. From this viewpoint, "teaching and learning are socially reorganized around the mediation of dynamic learner identities and include shifts in expert-novice status, dialogic interactions, and the use of innovative mediational tools" (Razfar, Khisty, & Chval, 2011, p. 195). In particular, we use the concept of mediation to describe the process by which the more experienced person facilitates the development of more sophisticated mental processes, which includes the way learners (i.e., PTs) can think about or talk about a concept in more nuanced or abstract ways. Mediation leads to learning, where learning is defined as the process of becoming a competent member of a community (Gee, 2005; Gutiérrez, 2002), which, in our case, is a community of culturally relevant teachers focused on treating children of color with dignity and pushing beyond a pedagogy of poverty (Haberman, 1991).

Tensions as Sites for Meaningful Learning

Clinical experiences, and the sense making of those experiences, are inherently tenuous. In many cases, they are unprecedented situations, where unpredictable scenarios arise and unfold. Dissonance between PTs and child(ren) can surface due to differences in race, culture, age, language, emotional state, social status, and/or power, among other factors. PTs experience recurring dissonance in their various interactions with children (see Table 2 below). Dissonance occurs as they simultaneously learn about systemic racism, oppression, and social stigmatization and marginalization (see Table 1 below). For PTs, these often happen to be their first encounters with perspectives that deviate from meritocratic viewpoints and the fallacy that democracy describes our sociopolitical arrangements. This simultaneous dissonance, and grappling with new knowledge or perspectives, often leaves PTs in a state of disequilibrium, an unclear space where tensions abound between the world they have come to understand and the new reality they are encountering.

Razfar (2013) argues that, "from a CHAT [cultural historical activity theory] point of view, learning is often mediated through situated spaces that are filled with contestation and cognitive dissonance" (p. 177). If we accept that tenuous spaces represent the potential to indeed be sites of meaningful learning, then it becomes increasingly important to be intentional when designing the mediational activities, including how we prepare and set up PTs to receive feedback and engage in critical reflection.

Research Questions

Because we are interested in the role and impact of clinical experiences for urban teaching, as well as the maneuvering of the teacher educators to mediate these experiences, we designed this study around the following research questions:

- How was it determined that adjustments needed to be made to the design and mediation of CEs, and what did these adjustments yield in terms of student learning outcomes?
- In what ways do clinical experiences (CEs) and mediating activities support prospective teachers' (PTs) development of knowledge, skills, and dispositions necessary for urban teaching?

The former question yields a narrative that includes the initial efforts of the teacher educators, the tensions that emerged in working through the complexities of urban teacher development, the adjustments deemed appropriate to mediate these tensions, and the outcomes of these adjustments. The latter question is aimed at understanding the meaning PTs associate with the clinical experiences and the affordances of these clinical experiences. Together, this data depicts a comprehensive portrait of how one group of teacher educators and PTs tried to collectively establish order in a "messy" learning space, and maximize opportunities to grow as urban teachers and urban teacher educators.

Context and Methodological Approaches

Urban Elementary Teacher Education Program (UETEP)

This study is situated within the context of an elementary teacher education program that is committed to, and focused on, developing PTs who are critically conscious. We operationalize critical consciousness as being prepared to recognize, confront, and address inequitable schooling practices and structures in urban contexts. As a faculty, we collectively maintain that urban communities possess innumerable

assets while simultaneously facing particular challenges, and our program is aimed at helping new teachers understand the histories and experiences of urban children, mine and leverage their learning resources, and subsequently develop culturally relevant and anti-racist teaching practices. As white teacher educators we engage in this work after careful consideration of our own experiences in a racialized world. We consistently refocus our work to highlight ways in which racial inequities are realized and we work to expose and reduce, if not eliminate, them through a specific approach to teacher preparation (Willey & Magee, 2015). This approach positions race at the center of teacher education clinical experiences and coursework.

In the UETEP, PTs are randomly grouped into cohorts of approximately 28 and remain together for the duration of the program. Eightyfive percent of the PTs are white (~10% of which are male) and 15% are students of color. The majority of PTs grew up in suburban or rural areas of central Indiana. Most PTs complete the program while attending school full-time, which translates to being in "class" two days each week from 9:00am-4:00pm, but many of them work part-time or full-time jobs simultaneously. Class includes both traditional university courses and embedded clinical experiences (see Table 1). During semester 3 and 4 (usually the PT's senior year), PTs complete a total of 16 weeks of student teaching. While the course titles that PTs take have not changed much over the past seven years, the foci of these courses have radically shifted to now include: culturally relevant pedagogy (Ladson-Billings, 1995), white privilege (Wise, 2008), structural racism and deconstructing historical schooling processes (Leonardo, 2009; Valencia, 2010).

Our program attends to these goals by putting the clinical experiences at the center of our UETEP. Clinical experiences are maximized

by a program structure that has each cohort of PTs partner with one urban elementary school, work with a consistent faculty team, and have program faculty supervise all clinical experiences including student teaching. Beginning on the first day of the program and continuing through student teaching, PTs spend entire days in their home elementary school. This arrangement supports the inclusion of not only explicit and intentional clinical experiences but also helps PTs to develop an understanding of the complex nature of the work of being a teacher in an urban elementary school. This is facilitated by discussions with program faculty, who are also in schools with the PTs; critical issues such as disproportionate representation of students of color in special education, effects of high stakes testing and inequitable and dishonorable discipline practices, are identified and discussed. The effect of these issues on instructional practices and student achievement are discussed and scrutinized. Through placement in one school for two years, PTs are able to build relationships with students, teachers, administrators and community members. Program faculty intentionally incorporate school activities, teacher meetings, professional development, and communitybased projects into the curriculum as a way to support a critical and comprehensive perspective on what is involved in becoming an urban teacher working towards disrupting injustice and providing equitable and meaningful learning opportunities for youth.

We maintain that the clinical experiences are essential if we are to help PTs fully understand and realize the potential of urban children. Therefore, our program is designed to gauge PSTs' growth largely through their performance in planning for, delivering, and reflecting upon their clinical experiences with children.

Table 1 Sequence of Courses and Foci of Elementary Teacher Education Program

	Semester 1 (junior year)	Semester 2 (junior year)	Semester 3 (senior year)	Semester 4 (senior year)		
Courses	 Math Methods (Pre-K-2) Literacy Methods (Pre-K-2) Diversity in Learning Teaching All Learners 	 Math Methods (3-6) Literacy Methods (3-6) Science Methods Educational Foundations 	 Literacy Methods III Special Education 8 weeks of paired student teaching with bi-weekly seminars 	 Social Studies Methods Fine Arts Methods 8 weeks of individual student teaching with bi-weekly seminars 		
Cross-cutting Topics	 Eliciting and capitalizing on children's thinking Culturally relevant teaching Systemic racism Problematic and marginalizing practices of schools Re-thinking curriculum 	 Eliciting and capitalizing on children's thinking Culturally relevant teaching (funds of knowledge) Racialized experiences in schools Critical perspectives around engagement and participation Re-thinking curriculum Teaching as Inquiry 	 Critical literacies, subjectivities, and discourses Culturally relevant teaching Social construction of disability and difference Designing and critiquing instructional approaches for struggling learners Reconceptualizing inclusion 	 Multimodal instruction & assessment Culturally relevant teaching Teaching as an expression of democracy Problematic and marginalizing practices of schools 		

Table 2 Clinical Experiences and Corresponding Mediating Activities

Clinical Experience	What Are They?	Mediating Activity			
Literacy and Math One-on-One Focus Student Sessions (Semesters 1 & 2)	Five to six sequential sessions (for each discipline) in which PTs focus on problem solving and student thinking (math) and emergent literacy and funds of knowledge (literacy)	Support for session planning; promotion of the focus on children's thinking; development of analytical skills through debriefing exercises; working towards more expansive views and explanations of children's behaviors			
Curriculum Centers/Invitations (Semester 1)	Three iterative, small group facilitations for literacy and three for math; pairs of PTs design, implement, and refine a Center based on dimensions of children's early development of number sense and literacy	Peer and instructor critique of conceptual plan; review of center lesson plan; reflection and accountability for improvements in between each iterative cycle; guidance in the production of documentation panel/notebook			
Asset-Based Community Survey (Semester 1)	PTs spend several hours exploring the local community of their home school. They are organized in groups that focus on community history, resources and experiences. PTs are specifically asked to focus on assets and to develop curricular ideas that connect to what they find. Additionally they look for evidence of inequities in the communities.	Instructor facilitates post exploration discussions. During these discussions PTs identify their own expectations and assumptions about the community. PTs work in groups to develop a multimedia presentation and paper that is shared with the class. School administrators are invited and discuss with PTs how the teachers are supported to also explore the community and challenge deficit notions they may have about families and resources.			
Observations (Semesters 1-4)	Periodic observations of classroom teaching that range from helping PTs become familiar with instructional approaches (e.g., workshop model) to practices related to student engagement and behavior support	Arranging a variety of contexts to observe; preparation via developing a lens to focus on certain issues; debriefing around key topics; extending invitations to teachers/staff for and facilitating Question & Answer sessions			
Community-School Events (CSE) (Semesters 1-4)	CSEs are opportunities for PTs to interact with students and families in non-classroom spaces. Typically these include: Family Fun Night, STEM	Connecting PTs to the community/parent listserv and phone distribution list that promotes events; providing time and space to make meaning of these events. These			

	Night, ISTEP testing and proctoring, District Curriculum Fairs, After School Clubs, After Care programs, front office, lunchroom and dismissal assistance, Book Fair, Hispanic Heritage Night and others PSTs are required to attend at least three of these events each semester and many attend more than that.	events make for productive class discussions regarding biases and stereotypes of urban families. PTs are required to draw on these experiences for capstone projects (storytelling) each semester.
Science Inquiry Unit (Semester 2)	Eight science inquiry-based lessons are developed by PT teams and taught to groups of 8-10 intermediate age students. The PTs are required to reflect on how the lessons demonstrate culturally relevant teaching using the 3 tenets of Ladson-Billings (1995).	Inquiry lessons are reviewed and supervised by the instructor. Classroom teachers are invited to provide feedback as well. In-class discussions focusing on culturally relevant teaching and critical pedagogy are facilitated by the instructor.
Community Mathematics Exploration (Semester 2)	Three, iterative small group facilitations; curriculum development work stems from a community member- or self-guided tour of the community in which PTs become more acquainted with community spaces and explore the mathematical practices of the community	Arrangement of a community walk led by a community member (e.g., parent); Support in interviewing children around their cultural resources; Peer and instructor critique of conceptual plan of lessons; Sustained dialogue from week-to-week; Strategic debriefing
Paired Student Teaching (Semester 3)	Pairs of PTs complete six days of classroom observations, and then quickly assume full teacher responsibilities for eight weeks	Multiple informal and a minimum of two formal observations by University (Faculty) Coaches; Sustained dialogue; Weekly seminars; Support for mentor (classroom) teachers
Individual Student Teaching (Semester 4)	PTs individually complete six days of classroom observations, and then quickly assume full teacher responsibilities for eight weeks	Multiple informal and a minimum of two formal observations by University (Faculty) Coaches; Sustained dialogue; Weekly seminars; Support for mentor (classroom) teachers

Research Design

We engaged in an ethnographic approach to this investigation for three reasons. First, we are intimately involved in the research context. Not only do we serve as instructors and university coaches of the student teaching experience, but we also think about and co-construct programmatic structures and practices to produce a particular type of novice teacher, one that is socially conscious and prepared to identify and confront inequitable schooling practices, and re-organize teaching and learning environments to serve those children who have historically been poorly served by schools. Our teaching, research, and professional responsibilities as faculty are closely aligned with, and afford us unfiltered access to, the context of the PTs' experiences and the corresponding ethnographic data. Second, we "loop" with our PTs, meaning that we serve in an instructional and supportive role for each of the four consecutive semesters of their professional preparation program. To fulfill this responsibility with fidelity requires us to connect with PTs intimately; this affords us the opportunity to understand, as much as possible, the actions and words of the PTs. Finally, we recognize that, in this case, adult education occurs within a complex activity system (Engstrom, 1999) in the elementary school. An ethnographic approach to this research demands that we enlist all possible data sources and techniques to help understand the meaning PTs make of their clinical experiences and to what degree we can attribute their development to said clinical experiences.

This study takes the form of a design experiment in the sense that the teacher educators have engaged in multiple iterations, or cycles, of the two-year professional program. With each iteration, there are hundreds, if not thousands, of decisions made about what curricular and instructional elements to keep, as well as to identify and to adjust those elements

deemed less productive. A significant proportion of our energy is committed to designing ways in which to utilize the clinical experiences as a vehicle to challenge dominant ideologies and question conventional pedagogical practices. By treating each cycle as a design experiment, we were able to make connections between specific clinical experiences and the ways in which these clinical experiences supported the growth of PTs. Finally, we have utilized auto-ethnographic methods to track and monitor, across time, the critical moments where one, or both, of us recognized that what we were doing did not have the impact that we had hoped for, and where we needed to adjust.

Data Sources

Within the spirit of ethnography, we have collected multiple forms of data, including field notes and recordings from seminars and student teaching observations debriefing sessions; PTs' lesson plans, projects, and written analyses of readings and clinical experiences; interview data with case PTs; mentor teacher evaluations of PTs; instructors' journals and reflective writing after classes, seminars, PT observations, and mentor teacher observations; and correspondence between instructors and PTs pertaining to their student teaching lessons. For the purposes of this article, we focus primarily on four data sources: 1) artifacts and dialogue pertaining to instructors' iterative thinking about mediating PTs' learning from clinical experiences, 2) conversations around student teaching lesson enactment, 3) end-of-program interviews with PTs, and 4) end-of-semester capstone projects.

Data Analysis

Our research questions involved different data sources and warranted different analytical methods. As such, we delineated our approach to data analysis according to each research question.

Research Question 1: When were adjustments to CEs and mediational activities needed, and what did these adjustments yield?

Informal and formal mechanisms were used to process the data (i.e., our experiences, actions, dialogue, and subsequent actions) pertaining to this research question. Our close working relationship and shared commitment to the development of each cohort over the course of four semesters, resulted in an informal, but effective, analysis mechanism as we regularly discussed issues that surfaced in courses and CEs, especially during student teaching. In fact, it was during student teaching when the most poignant issues surfaced, as this tends to be a particularly intense experience for PTs. Supporting PTs' growth towards culturally relevant teaching is certainly not straightforward; therefore, we utilized collaborative analysis to make sense of emergent phenomena and make decisions about how best to move forward in the short term, as well as with subsequent cohorts. Our primary formal analysis mechanism was document analysis (e.g., iterations of syllabi, assignment descriptions, rubrics, and feedback to PTs), but also included discourse analysis in that we intentionally dissected and attributed meaning to PTs' words in the (shared) context of the CEs and corresponding mediational activities.

Research Question 2: How did CEs and mediational activities support PTs'

Growth? Our data analysis process was continuous, involved distinct iterations, and was guided by the principles of grounded theory. We were continually enmeshed in the process of teaching and supporting student teachers; our day-to-day teacher education work was continually informed by real-time data. Therefore, it was necessary to develop mechanisms that allowed us to continually process data in a timely way so that we could adjust and re-design mediation for PTs as they progressed through the program and as

decision-making intensified. This initial analysis of data was done both individually and collaboratively through dialogue. Next, particular sets of data (e.g., end-of-program interviews, discussions in seminars, and the end-of-semester storytelling projects) were identified, organized, and analyzed with respect to specific questions. For example, we analyzed the recordings of the seminar sessions with the following question in mind: In what ways does the space and agenda provided in the seminars allow PTs to grapple with complex issues of classroom teaching and develop culturally relevant teaching practices?

Over time, it became clear that we were focused on the same phenomenon, the role of clinical experiences in PTs' development of culturally relevant teaching practices, and that when we listened to PTs talk about their own and others' teaching, we noticed similar aspects of their discourse. Still, we decided to, independently, examine the data initially; once initial cycle of data analysis was complete, we conferred, refined codes, and re-coded to focus on emergent themes, but this time with much tighter parameters around what constituted evidence of a particular code or sub-code.

In addition, our position as participant observers afforded us intimate knowledge of the context surrounding the interactions among participants. In other words, our interpretations of events and participants' words were enhanced by our regular presence in the school (Gutierrez & Stone, 1998) and our close working relationships with PTs akin to the ethnographic privilege described by Prus (1996).

Finally, audio-recorded data was listened to individually by the two teacher educators. Each researcher independently developed codes that reflected what he/she registered as a relevant aspect. After individual analysis, the two researchers conferred in order to reduce the number of codes and refine the codes to fit within parameters that were mutually agreed upon (i.e., consensus was reached on what constituted each code). These codes were then re-applied to the data in an effort to identify the

most prevalent themes. Through ongoing dialogues and the analyses, much like those found in duo-ethnographic methodologies (e.g., Norris, Sawyer, & Lund, 2012), the two authors of this study were able to arrive at aspects of the teacher education partnership model that appeared to have made the greatest impact on the school children and PSTs. Moreover, we were able to engage in regular dialogue as a means to intentionally interrogate one another's "lens" and the subsequent meaning each of us made of the data (Wells, 2007).

Findings

In this section, we present data and analysis about 1) the mediational activities involved in maximizing development towards culturally relevant teaching; 2) how the clinical experiences contribute to knowledge and skills related to culturally relevant teaching; and 3) the emergent tensions resulting from PTs' participation in clinical experiences, and how those tensions were mediated. In order to preserve the integrity of the data, as it is situated in a dynamic social contextual, we present the data in the form of vignettes in an effort to provide thick descriptions (Geertz, 1994). Each of the vignettes was selected because it struck us as poignant, capturing the essence of a complex developmental issue, while also representing a particularly salient theme. In other words, the vignettes ought not be considered outliers, or exceptional scenarios, but rather representative of recurring situations and especially meaningful learning or sources of tension.

Mediational Activities

These first findings stem from the autoethnographic data pertaining to the mediational activities in which we engaged with PTs (shared above in Table 2). Through our own reflective processes, along with our third instructional team member, we arrived at a set of mediational practices that seemed to produce reflection and critical consideration that surpassed results of past cycles of cohorts (see Table 3). This section documents the evolution of of our mediational activities, and provides a narrative of how we recognized the need for change and what shape the changes then took.. Revised meditational activities include: addition of a Culturally Relevant Pedagogy (CRP) (Ladson Billings, 1995) section in all lesson plans over the four semesters of the program; increased focus on CRP discussions with PTs before and after field experiences; revised CRP video assignment in student teaching; and intentional scaffolding of critical readings over four semesters that push PTs to consider a more complex understanding and enactment of CRP.

We first began to concentrate more attention on the clinical experiences almost five years ago. At the time, we were primarily teaching the Semester 2 methods courses (mathematics and science) and already had built into our methods courses multiple opportunities to work with children in the intermediate grades, both individually and in small groups. In addition, we also had a plan for supporting PTs as they planned for and debriefed these experiences, although these were largely intuitive supports, meaning that we were operating from a relatively unrefined space where we designed these supports from what we suspected was helpful.

Since then, we have iteratively revised the way we support PTs in the clinical experiences. We added significant and intentional readings on CRP and embedded the real world use of this into lesson plans and field work. It is important to note that we were able to make significant changes after we were iteratively involved in the student teaching experiences. Working with student teachers afforded us an opportunity to assess the level of critical consciousness in our PTs during their student teaching and seminar discussions. Unfortunately, we determined (Willey & Magee, 2016), that our teacher education program (UETEP) was not producing the level of critical development that we assumed it was. As a result, we included the revised meditational activities described here.

Table 3	
Cycles of Cohorts in	UETEP.

Term	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016
Point in Cycle I - Harrison Elementar y School	Individ ual Semest er 2 courses	Individu al Semeste r 2 courses	Semester 1 with Cohort 1 at Harrison	Semeste r 2 with Cohort 1	Semest er 3 with Cohort	Semester 4 with Cohort 1	Semester 1 with Cohort 3 at Harrison	Semester 2 with Cohort 3 at Harrison	Semester 3 with Cohort 3 at Harrison	Semester 4 with Cohort 3 at Harrison
Point in Cycle II - Westside and Puente Elementar y Schools						Semester 1 with Cohort 2 at Westside	Semester 2 with Cohort 2 at Westside	Semester 3 with Cohort 2 at Westside	Semester 4 with Cohort 2 at Westside	Semester 1 with Cohort 4 at Puente

In addition to the early field experiences, we also, made significant changes to the student teaching seminars. First, instead of meeting as a whole cohort, we split the cohort in half and met with each group every other week. Second, we focused the content of the seminars on the PTs' videos of classroom instruction. Related to the classroom videos, we found that asking PTs to record themselves teaching a "culturally relevant lesson" reinforced shallow ideas of what CRP looked like. For example, PTs would write lessons that they considered "culturally relevant" and continued to identify this kind of teaching as "different" from "regular teaching." Instead, we wanted to encourage PTs to look at their teaching holistically and use a CRP framework, specifically the three tenets articulated by Ladson-Billings (1995), to analyze it.

Finally, we began to explicitly highlight culturally relevant teaching practices that occurred during both observations and field experience activities. PTs began to recognize that these practices were more about teacher attitudes and dispositions, and acceptance of students (e.g. consciously accepting students' home language), then they were about using *only* particular curricular resources (e.g. books about children of a particular race).

Impact of Clinical Experiences on PTs' Critical Consciousness

In this section, we highlight three developmental domains in which the clinical experiences, including community-school events (CSEs), were particularly influential with regard to PTs' critical consciousness; those domains are 1) appreciating and understanding families, 2) recognizing problematic school practices that disproportionately impact students of color, and 3) understanding the fragile nature of a critical consciousness.

Appreciating and Understanding Families

The CSEs provided opportunities for PTs to develop a better understanding of how children's experiences outside of school might serve as resources to draw upon in instruction. Jason, a PT, expressed the value he associated with the CSEs:

The best part of events was seeing parents and talking to parents, I mean, because obviously they are so busy, and other than Parent-Teacher conferences, which are so tense and talking about test scores, and they're trying to voice

concerns in a 15-minute block, the best part about the community events was seeing the parents and seeing the kids in a non-academic level, I mean, that's a rare opportunity. And, you just learn so much about who they are, and you have that trust.

Whereas social institutions tend to normalize behavior and customs according to white values and frames of reference (Sensoy & DiAngelo, 2015), Jason's comments suggest that these informal interactions with families (of color) afforded him the opportunity to "see" families in a way that departs from the characterization of, and discourses about, families of color that tend to unfold in schools (e.g., as helpful or not helpful in children's development; as having educational background that leads to the provision of an "appropriate" home life). His insights also reflect a critique of the limited relationship classroom teachers tend to have with parents, as well as the common and over-simplified "business" in which teachers need to engage with parents (i.e., talking about "achievement").

While Jason's reflection revealed the importance of encouraging PTs to interact with families in CSEs as a means of deconstructing conventional notions and roles of families, he also noted that these interactions can be the impetus for building a trusting relationship with families. Further evidence that Community-School Events can serve in this capacity is found in the following anecdote narrated by Jason:

You know, there's different times where parents call in in the morning, or I saw a parent in the hallway, and they felt comfortable and I felt comfortable just having a conversation with them, talking about anything. A parent will call and say, (interjects) you know we have this policy where if a student comes in tardy, he or she can't get breakfast. So, a parent has a hard time getting to work on time, drops

the kid off in a time crunch, meaning the kid might not have gotten breakfast in the morning [at home], and then he or she isn't allowed to get breakfast [at school]. So, they felt comfortable asking me, you know, "Can we make sure that..." — she'd call in [to the classroom], and I'd answer — "Can we make sure he has breakfast sitting on his desk before we get in?" And, you know, it's things like that, I think, were the result of just being apart of this school and this community.

Jason's commentary suggests that he is becoming a teacher who shares the parents' vision for the care and development of their children. He speaks to the power and importance of interacting and building relationships with families, which leads to interdependence and trust, key components necessary to achieve such a shared vision.

Recognizing Problematic Schooling Practices that Impact Students of Color

An examination of the data around clinical experiences revealed numerous examples of PTs recognizing the racialized and problematic teaching practices affecting students of color. We found that, starting with classroom observation in the first semester, the PTs were able to recognize certain practices as controversial or troublesome. As PTs progressed, PTs tended to become complicit in these problematic practices; we view this phenomenon as much a function of the complex sociopolitical landscape of urban schooling as it is of the PTs' or mentor teachers' inability to recognize the problematic practices. Still, with strategic mediational activities, PTs ability to notice and talk about problematic practices became more facile.

As mentioned above, we built our most recent series of seminars around PTs' videos of

their teaching. This initiative was designed 1) to serve as a launching point to analyze and discuss aspects of culturally relevant teaching present in the teaching episode, or to serve as opportunities to develop culturally relevant teaching within the lesson, and 2) to generate examples and provide an opportunity for collective analysis of dilemmas of practice that PTs encountered. Prior to sharing a video, the PT would provide contextual details surrounding the lesson, addressing common questions such as, "Who are the students?" "What lessons preceded this lesson?," and "What are the goals for the lesson?" In a seminar accompanying the final semester of student teaching, Alana presented her video. The following vignette illustrates the ease with which PTs can become complicit in problematic practices, and, with vigilance and appropriate mediation, PTs can generate examples of related (problematic) practices and, as a result, become less indifferent to these practices.

> Alana is working towards a dual license in special education. She is student teaching in a "functional academics" classroom, a multi-aged, self-contained classroom serving children "who have been taken off the diploma track," meaning that a decision has been made as early as 2nd or 3rd grade - that the child is not capable of successfully completing the high school graduation requirements. Even though we recognized that making decisions about children's instruction - including separating them from their grade level peers - is problematic and often based on faulty assumptions and data, we did not engage in that conversations at this point in time. Alana stated that the two 6th grade girls in the video "need to be taught the same concept day after day, because they can't retain anything," and that, in the context of mathematics lessons, the girls "have to

use manipulative because they need to touch each thing when counting." Alana's classmate, Erin, who also spends time in this classroom, agreed with Alana's assessment of the girls' cumulative skills.

The tone of the description of the girls was unsettling. Alana has painted a deficit-oriented picture of two girls that are essentially helpless. This contradicted what we saw in previous observations with these girls, which we pointed out to Alana and Erin. Alana's description of the classroom and the girls reflects the description of the girls suggested by the mentor teacher, suggesting that Alana was susceptible to the dominant, matter-offact narratives that often surround children in classroom like this.

"This focus lesson we are about to watch," Alana continues, "will involve a game where the girls will roll a die and move forward that many spaces on a game board. Then, they will be prompted to make a given two-digit number with baseten blocks." Alana reiterated that they need to have the blocks in order to touch them while they count. We watch the video.

After the video was over, we engaged in a brief conversation about the protocol to follow in order to place a student on the non-diploma track. It was, at best, unclear. We then asked Alana if she ever encountered incidents that suggested that the girls were more capable than what the narrative about them implied. Alana then confessed that she found the mentor teacher to be unprepared and undynamic in her instruction of the students; rather, most of the lessons were scripted, lowlevel, and predominantly skill-based. She shared instances when she asked to do something new, to which the mentor teacher responded, "They probably can't

do that." Alana told us, "I usually just do it anyways."

The video assignment offers rich opportunities to engage student teachers in substantial discussions about critical issues in special education. First, we shared concerns about how classrooms are often not suited to support struggling learners. Secondly. We used the video to challenge our PTs to consider how the students with special needs have been historically ill-served in regular classrooms and how this history, when left unrevealed leads the teachers in the building to view their students with deficit frameworks. Finally, we were able to address how these deficit frameworks translate to reduced expectations and the use of low-level, skill-based exercises.

One PT, Zandra, drew a parallel to a situation that unfolded at another school in the third grade class where she was student teaching. She told of a new school psychologist who was discussing with teachers the possibility of transferring a student, DaJuan, into the self-contained classroom which offered intensive supports. Zandra was baffled and angered by this maneuver, as she has seen significant growth in DaJuan's development in the four months she has been with him. She wondered if this was a misguided decision, based on biased analyses and skewed by some behavioral concerns, that will set into motion an educational trajectory that does not tend to end well for children of color. She seemed to be making some real connections between adults' perceptions, their inability or unwillingness to accommodate certain children, and the ways in which schooling has historically failed particular subgroups of children.

This vignette illuminates (at least) two noteworthy realities. First, PTs have spent their entire lives immersed in a society normalized by whiteness (Leonardo, 2009) and able bodiedness (Annamma, 2015). This matters here because PTs - especially white PTs, but also PTs of color - are susceptible to internalizing dominant narratives about children, particularly children of color who don't fit the stereotype of how children should behave in school, or who don't respond to teacher moves that are supposed to work seamlessly; the problem too easily becomes located in the child. These struggles coincide with life-long messages propagating the dysfunction and abnormality of children and communities of color in countless social domains and scenarios. It becomes hard to conjure up alternative explanations for behaviors and interpersonal dissonance. Parallels can be drawn in terms of how social institutions handle and talk about disability. In this case, Alana seemed to be susceptible to internalizing the conventional wisdom around the shortcomings of all of the children in the functional academics classroom: why they were there and what they were capable of. Furthermore, she quickly assimilates this discourse, increasing the likelihood that this narrative about the girls will not be disrupted.

Second, the most important point is that the problematic nature of the discourse, and all of the troublesome underlying assumptions, were confronted. If teacher educators are paying attention, we will see that problematic assumptions, perceptions, ideologies, and discourses about children of color are present in nearly every interaction with PTs. Being able to detect and skillfully mediate these interactions in a productive way is an elusive challenge facing teacher educators. It speaks to the importance of having an instructional team that depends on one another to share the responsibility and collectively shape tactics for mediating pervasive and potentially harmful viewpoints and

discourses. It also underscores how essential it is to create a culture of teaching and learning where PTs and teacher educators are able to hear and receive feedback from one another.

Understanding the Fragile Nature of a Critical Consciousness

PTs often approach student teaching as a space to showcase their abilities as teachers. We found that many PTs arrive in teacher education with strong beliefs about their existing skills, including proficiency, and they look to their educator preparation program to validate these beliefs. This is not surprising, given the many years PTs spent in schools. Many of them are "legacy" teachers, coming from families of teachers who have encouraged the PT, often from an early age, to become a teacher. After PTs are introduced to the idea that school inequalities exist, they often take the stance of the "social justice" oriented teacher. While this is a natural first step, many of our PTs routinely minimize the efforts needed to be an actual, vocal advocate for students, especially students of color, in public schools. Additionally, once they are exposed to the injustices of schooling they are often eager to take on the savior role for students (Picower, 2009).

Despite readings about being the "white savior," many PTs struggle to understand how difficult it is to develop as, and actually be, a critically conscious teacher. As teacher educators we incorporate these ideas, struggles, and narratives into our coursework and early clinical experiences. But, it is often during the student teaching when PTs are confronted with the sociopolitical realities of school and teacher talk on a day-to-day basis, that their underlying beliefs about children, emerge. As described above, part of the seminar experience asked PTs to share video clips of their teaching and to analyze them through the lens of culturally relevant teaching. We focused not just on adding culture into education but critically analyzing

how teacher talk and actions (i.e., cultural competence) support or injure students, especially students of color.

After a viewing a classmate's video, the discussion turned to teachers' perceptions of particular students, as evidenced by private discourse around and treatment of these students, all of whom were black children. Allie felt compelled to share her own story about how easy it was to be consumed by negative teacher discourse in a school, a discourse that blames children for their classroom struggles or particular school dynamics. Over the past year and a half, Allie proved to be a reflective and thoughtful (white) PT; she frequently made insightful connections between critical readings and school practices, and, in particular, her storytelling projects showed her coming to terms with her own struggles to understand her personal, subconscious biases towards children and communities of color. Still, we safely place her in the top quartile in terms of her nuanced understanding of urban schooling and her genuine commitment to representing equitable teaching with children of color.

As we have alluded to in this article, knowledge that inequities exist and personal commitments to equitable teaching practices tend not to be sufficient once the PT is situated squarely in the "messy," complicated social spaces of urban schools. Allie reflected on her recent clinical experiences, "I was shocked at how quickly I got swept up into the negative talk about kids. I just couldn't believe how fast I was worn down and pulled into the conversations myself. It was terrifying. If I had not changed mentor teachers, I worry about where I would be."

Allie's comments resonated with the PTs in the room. They nodded their heads as they acknowledged the truth in her story. Many of them had experienced the same thing; Allie provided them with an opportunity to acknowledge and candidly admit it. For us, this

marked an important shift in the authenticity of the dialogue represented in seminars. During previous seminars, PTs wanted to discuss the problems, but not necessarily with regard to their own actions. Historically, it was difficult to help PTs recognize within themselves certain, unproductive discourses around children, which required introspective analyses of self. Similarly, it is often challenging to help PTs to reach the depths of rationale underlying teachers' behavior, which requires unpacking "conventional wisdom" that often drives seemingly benign school protocols. Incorporating the video clips and refocusing the lens on the PTs' work helped the group to shift to analyzing themselves as teachers and recognizing how fragile their passions for student advocacy were.

Discussion and Implications

As research findings have long suggested, we found that the clinical experiences do, indeed, matter in terms of PTs' development and understanding of curriculum, instruction, and the social processes of schooling. Moreover, and pertaining to the focus of our research, we found that the clinical experiences contribute to PTs ability to shed deficit notions of children and communities of color and develop a lens in which they recognize problematic practices and structures within school that have a tendency to marginalize or alienate particular children; in other words, the clinical experiences (and corresponding mediational activities) have helped PTs see the inequitable practices and arrangements within classrooms, grapple with these issues, and move towards innovating their own practices that include connecting with children in equitable ways. We conceptualize this process in terms of the development of

culturally relevant urban teacher identities, and our data - particularly that from end-of program interviews, discussions in seminars, and the end-of-semester storytelling projects - reveal that the clinical experiences have led to various ways in which the PTs construct themselves as culturally relevant urban teachers.

We analyzed this data iteratively for five years. There were countless moments when we had to re-think our approaches to not only coursework, but our design of clinical experiences, too. Each time we re-designed and re-launched the clinical experiences, we asked ourselves, "What are we hoping these experiences will help PTs 'see' or be able to do?" Moreover, it is clear to us that clinical experiences, in and of themselves, are not magical; that is, they do not automatically lead to deeper knowledge of children, or the development of critical consciousness. In fact, we know well that if we do not anticipate what might occur during clinical experiences, and intentionally plan for how to mediate PTs' experiences, these same clinical experiences that hold the power to catalyze development could very well galvanize deficit-oriented beliefs about children of color and urban teaching. Again, these clinical experiences are neither benign nor neutral.

The vignettes and insights from PTs reveal the power of field experiences that place PTs in uncomfortable and challenging settings. It is in these settings that faculty can mediate a better understanding of the dominant narratives around race and equity in schools. While it didn't always feel like it, the data suggested that the overall effect of these placements was positive, meaning the challenging set of CEs led to growth towards culturally relevant teaching practices. Tensions inevitably surface in urban CEs, where PTs are still developing a

fundamental understanding of children, the importance of community and cultural knowledge and ways of being, and how to commit to a culturally relevant pedagogy in a time where teachers are asked to get immediate results on a narrow set of skills. There is innumerable dimensions of urban teaching to process and make sense, and this sense-making requires, in addition to a reflective or introspective disposition, thoughtful and skillful mediation from mentor teachers and teacher educators. Despite the wide-spread belief that CEs matter in PTs' development, it is a mistake to think that CEs automatically translate into critical growth. Critical teacher educators must assume responsibility of monitoring how PTs exist in, derive benefits from, and thrive within, the two simultaneous activity systems (Gutierrez & Vossoughi, 2010): one where they examine children's cognitive and social development, and one where they become increasingly aware of their own critical consciousness and sociocultural development.

At the same time, it is essential to be honest and explicit with PTs about what is reasonable to experience and feel in response to the assortment of clinical experiences they will have. Strategic interventions can help provide clarity for PTs around what has, indeed, been learned at particular intervals in the program, and what is left to be developed in the final practicum and beyond. Undoubtedly, PTs will experience a range of interactions with children and adults, and not have the skills or wit to process and respond immediately to each respective situation; coursework alone cannot possibly prepare PTs for the variety or intensity of possible school-based scenarios. Thus, we underscore the importance of developing a reflective disposition when encountering challenging situations. It is our responsibility as teacher educators to help PTs become familiar with and internalize a protocol with which they can evaluate and respond to situations in which they found themselves unprepared.

At the heart of urban teacher development is a need to understand ourselves in relation to those we aim to teach. As Emdin (2016) reminds us, "...this process [of urban teaching] can be either painful or enjoyable depending on our perception of the learner" (p. 142). While the accountability pressures and neoliberal forces have a very real, tangible effect on urban schools and classrooms, teachers must also find ways to enact creative insubordination (Gutierrez, Irving, & Gerardo, 2013), that is, developing a pedagogy that stems from what they know urban youth deserve. Clinical experiences, in tandem with skillful mediation, hold immense potential to bring new light to dark realities that are too often neglected or glossed over in superficial ways. Transformative urban teaching in the 21st century demands that we engage directly and intentionally with children, and forge new models to help us all - PTs, teacher educators, and school staff alike - process interactions situated in complex social systems.

Notes

 We use interchangeably the terms children of color, Black and Latina/o children, and urban youth. Each of these terms is meant to connote not only the non-white and marginalized status of people of color, but also the specific geography in which they reside, namely, and in this case, the city.

References

Annamma, S. A. (2015). Whiteness as property: Innocence and ability in teacher education. *The Urban Review*, 47(2), 293-316.

- Anzaldúa, G. (1987). La frontera/Borderlands: The new mestiza. San Francisco: Aunt Lute.
- Bonilla-Silva, E. (2013). Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in America. Rowman & Littlefield Publishers.
- Brookfield, S. D. (2000). The concept of critically reflective practice. *Handbook of adult and continuing education*, 33-49.
- Darling-Hammond, L., & Bransford, J. (2005). Preparing teachers for a changing world: Report of the Committee on Teacher Education of the National Academy of Education.
- Engeström, Y. (1999). Activity theory and individual social transformation.. In Y. Engeström, R. Miettinen and R.-L. Punamaki (Eds.), *Perspectives on activity theory* (pp. 19-38). New York: Cambridge University Press.
- Emdin, C. (2016). For white folks who teach in the hood

 and the rest of y'all too. Boston: Beacon Press
 Boston.
- Flores, A. (2007). Examining disparities in mathematics education: Achievement gap or opportunity gap?. *The High School Journal*, *91*(1), 29-42.
- Gandara, P. C., & Contreras, F. (2009). The Latino education crisis: The consequences of failed social policies.Harvard University Press.
- Gee, J. P. (2005). Semiotic social spaces and affinity spaces.

 Beyond communities of practice language power

 and social context, 214-232.
- Geertz, C. (1994). Thick description: Toward an interpretive theory of culture. *Readings in the philosophy of social science*, 213-231.
- Gutiérrez, K., & Vossoughi, S. (2010). Lifting off the ground to return anew": Documenting and designing for equity and transformation through social design experiments. *Journal of Teacher Education*, 61(1-2), 100-117.
- Gutierrez, R. (2002). Enabling the practice of mathematics teachers in context: Toward a new equity research agenda. *Mathematical Thinking and Learning*, 4(2-3), 145-187.
- Gutiérrez, R. (2008). A "gap-gazing" fetish in mathematics education? Problematizing research on the achievement gap. *Journal for Research in Mathematics Education*, 357-364.
- Gutiérrez, R., Irving, S., & Gerardo, J. M. (2013).

 Mathematics, marginalized youth, and creative insubordination: A model for preparing teachers to

- reclaim the profession. In R. Gutierrez (Chair), Reclaiming the profession: Preparing secondary mathematics teachers to take a stand in highpoverty schools. Symposium presentation at the Annual Meeting of the American Educational Research Association, San Francisco, California.
- Gutiérrez, R. (2015). Nesting in Nepantla. In N. M. Russell,
 C. M. Haynes, & F. Cobb, F. (Eds.), Interrogating
 Whiteness and Relinquishing Power: White
 Faculty's Commitment to Racial Consciousness in
 STEM Classrooms.
- Haberman, M. (1991). The pedagogy of poverty versus good teaching. *Phi Delta Kappan*, 73(4), 290-294.
- Krogstad, J. M. & Fry, R. (2014). Department of Education projects public schools will be 'majority-minority' this fall. Retrieved April 12, 2016 from:

 http://www.pewresearch.org/fact-tank/2014/08/18/u-s-public-schools-expected-to-be-majority-minority-starting-this-fall/
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. Theory into Practice, Vol. 34, No. 3, Culturally Relevant Teaching (Summer, 1995), pp. 159-165.
- Ladson-Billings, G. (2009). The dreamkeepers: Successful teachers of African American children. John Wiley & Sons.
- Leonardo, Z. (2009). *Race, whiteness, and education*. Routledge.
- Martin, D. B. (2009). Researching race in mathematics education. *Teachers College Record*, 111(2), 295-338.
- Murrell, Diez, Feiman-nemser & Schussler (2010). *Moral dimensions of teaching*
- Norris, J., Sawyer, R. D., & Lund, D. (Eds.). (2012).

 Duoethnography: Dialogic methods for social,
 health, and educational research. Left Coast Press.
- Picower, B. (2009). The unexamined whiteness of teaching: How white teachers maintain and enact dominant racial ideologies. *Race Ethnicity and Education*, 12(2), 197-215.
- Prus, R. C. (1996). Symbolic interaction and ethnographic research: Intersubjectivity and the study of human lived experience. Suny Press.
- Razfar, A., Khisty, L. L., & Chval, K. (2011). Re-mediating second language acquisition: A sociocultural perspective for language development. *Mind*, *Culture*, and *Activity*, 18(3), 195-215.
- Razfar, A. (2013). Multilingual mathematics: Learning through contested spaces of meaning making.

- International Multilingual Research Journal, 7(3), 175-196.
- Sensoy, Ö., & DiAngelo, R. (2015). Is everyone really equal?:

 An introduction to key concepts in social justice
 education. Teachers College Press.
- Téllez, K., Moschkovich, J., & Civil, M. (2011). Latinos/as and mathematics education. Latinos/as and Mathematics Education: Research on Learning and Teaching in Classrooms and Communities, 1.
- Valencia, R. R. (2010). Dismantling contemporary deficit thinking: Educational thought and practice.

 Routledge.
- Vygotsky, L. S. (1978). Mind in society: The development of higher mental process.
- Wells, G. (2007). Semiotic mediation, dialogue and the construction of knowledge. *Human Development*, 50(5), 244-274.

- Willey, C. & Magee, P. A. (2015). Teacher educators and preservice teachers working through the complexities of whiteness and race in mathematics and science. In N. M. Joseph, C. M. Haynes, & F. Cobb (Eds.),

 Interrogating whiteness and relinquishing power:

 White faculty's commitment to racial consciousness in STEM classrooms. Langer Publishing.
- Wise, T. (2008). Explaining white privilege (Or, your defense mechanism is showing). Retrieved 9/15/2016 from: http://www.timwise.org/2008/09/explaining-whiteprivilege-or-your-defense-mechanism-is-showing/

About the Author(s)

Craig Willey, PhD, is Assistant Professor of Mathematics at Indiana University-Purdue University Indianapolis.

Paula Magee, PhD, is Clinical Associate Professor and Coordinator of the Urban Education Master's Program at Indiana University-Purdue University Indianapolis.